

§ 86.204-94

§ 86.204-94 Section numbering; construction.

(a) In the section number, the two digits following the hyphen designate the first model year for which a section is effective. A section remains effective until superseded.

(b) *Example.* Section 86.204-94 applies to the 1994 and subsequent model years until superseded. If a § 86.204-96 is promulgated it would take effect beginning with the 1996 model year; § 86.204-94 would apply to model years 1994 through 1995.

§ 86.205-94 Introduction; structure of this subpart.

(a) This subpart describes the equipment required and the procedures to follow in order to perform gaseous exhaust emission tests on gasoline-fueled light-duty vehicles and light-duty trucks. Subpart A of this part sets forth testing requirements and test intervals necessary to comply with EPA certification procedures.

(b) A section reference without a model year suffix refers to the section applicable for the appropriate model years.

(c) Three topics are addressed in this subpart. Sections 86.206 through 86.215 set forth specifications and equipment requirements; §§ 86.216 through 86.226 discuss calibration methods and frequency; test procedures and data requirements are listed (in approximate order of performance) in §§ 86.227 through 86.245.

§ 86.206-94 Equipment required; overview.

This subpart contains procedures for exhaust emission tests on gasoline-fueled light-duty vehicles and light-duty trucks. Equipment required and specifications are as follows:

(a) *Exhaust emission tests.* Exhaust from gasoline-fueled vehicles is tested for gaseous emissions using the Constant Volume Sampler (CVS) concept (§ 86.209). Equipment necessary and specifications appear in §§ 86.208 through 86.214.

(b) *Fuel, analytical gas, and driving schedule specifications.* Fuel specifications for exhaust emission testing for gasoline-fueled vehicles are specified in § 86.213. Analytical gases are specified

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in § 86.214. The EPA Urban Dynamometer Driving Schedule (UDDS) for use in gasoline-fueled emission tests is specified in § 86.215 and appendix I to this part.

§ 86.207-94 [Reserved]

§ 86.208-94 Dynamometer.

(a) For testing that is conducted by the Administrator, the dynamometer shall have a single roll with a nominal diameter of 48 inches (1.22 meters), an electrical power absorption unit for simulation of road load power, flywheels or other means for simulating the inertia weight as specified in § 86.229, and a roll or shaft revolution counter or other means for determining distance driven.

(b) For certification testing that is conducted by the manufacturer, a dynamometer with different characteristics may be used provided cold CO emissions are not decreased.

§ 86.209-94 Exhaust gas sampling system; gasoline-fueled vehicles.

The provisions of § 86.109-90 apply to this subpart.

§ 86.210-94 [Reserved]

§ 86.211-94 Exhaust gas analytical system.

The provisions of § 86.111 apply to this subpart, except that the NO_x analyzer is optional.

§ 86.212-94 [Reserved]

§ 86.213-04 Fuel specifications.

Gasoline having the following specifications will be used by the Administrator except that the Administrator will not use gasoline having a sulfur specification higher than 0.0045 weight percent. Gasoline having the specifications set forth in the table in this section, or substantially equivalent specifications approved by the Administrator, may be used by the manufacturer except that the octane specification does not apply. In lieu of using gasoline having these specifications, the manufacturer may, for certification testing, use gasoline having the specifications specified in § 86.113-04 provided the cold CO emissions are not decreased. Documentation showing

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that cold CO emissions are not decreased must be maintained by the manufacturer and must be made available to the Administrator upon re-

quest. The table listing the cold CO fuel specifications described in the text in this section follows:

TABLE—COLD CO FUEL SPECIFICATIONS

Item	ASTM test	Cold CO low octane value or range	Cold CO high octane ¹ value or range
(RON+MON)/2, min	D 2699	87.8±.3	92.3±0.5
Sensitivity, min	D 2699	7.5	7.5
Distillation range..			
IBP, deg.F	D 86	76-96	76-96
10% point, deg.F.	D 86	98-118	105-125
50% point, deg.F.	D 86	179-214	195-225
90% point, deg.F.	D 86	316-346	316-346
EP, max, deg.F	D 86	413	413
Sulfur, wt. %	D 3120	0.0015-0.008	0.0015-0.008
Phosphorous, g/U.S gal, max	D 3231	0.005	0.005
Lead, g/gal, max		0.01	0.01
RVP, psi	D 4953	11.5±.3	11.5±.3
Hydrocarbon composition	D 1319		
Olefins, vol. pct		12.5±5.0	10.0±5.0
Aromatics, vol. pct		26.4±4.0	32.0±4.0
Saturates		Remainder	Remainder.

¹ Gasoline having these specifications may be used for vehicles which are designed for the use of high-octane premium fuel.

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Gasoline having the following specifications will be used by the Administrator. Gasoline having the specifications set forth in the table in this section, or substantially equivalent specifications approved by the Administrator, may be used by the manufacturer except that the octane specification does not apply. In lieu of using

gasoline having these specifications, the manufacturer may, for certification testing, use gasoline having the specifications specified in §86.113-90 provided the cold CO emissions are not decreased. Documentation showing that cold CO emissions are not decreased shall be maintained by the manufacturer and shall be made available to the Administrator upon request.

TABLE—COLD CO FUEL SPECIFICATIONS

Item	ASTM test	Cold CO low octane value or range	Cold CO high octane ¹ value or range
(RON+MON)/2, min	D2699	87.8±.3	92.3±0.5
Sensitivity, min	D2699	7.5	7.5
Distillation range:			
IBP, °F	D86	76-96	76-96
10% point, °F	D86	98-118	105-125
50% point, °F	D86	179-214	195-225
90% point, °F	D86	316-346	316-346
EP, max, °F	D86	413	413
Sulfur, wt. %	D3120	0.035±0.015	0.020±0.015
Phosphorous, g/U.S gal, max	D3231	0.005	0.005
Lead, g/gal, max		0.01	0.01
RVP, psi	D4953	11.5±.3	11.5±.3
Hydrocarbon composition	D1319		
Olefins, vol. pct		12.5±5.0	10.0±5.0
Aromatics, vol. pct		26.4±4.0	32.0±4.0
Saturates		Remainder	Remainder

¹ Gasoline having these specifications may be used for vehicles which are designed for the use of high-octane premium fuel.